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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☒ Responsive to communication(s) filed on 8/19/96
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-8 is/are pending in the application.
- Of the above, claim(s) 2 and 8 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1 and 3-7 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on 6/7/95 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449. Paper No(s) 312, 7
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

Applicants' election of Group II in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (M.P.E.P. § 818.03(a)).

Claims 4-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite in its recitation in part (b)(ii)B. of "the chemical agent or physiological stress defined in (a)(ii)" which lacks antecedent basis in part (a)(ii) or anywhere else in the claim.

Claim 4 is indefinite in its recitation in part (d)(ii) of "the restorer trait described in C." which lacks antecedent basis in part C. Amendment of the claim to change "C." to --(c)-- would obviate this rejection.

Claim 4 is indefinite in its recitation in part (d)(ii) of "when applicable" which is redundant, given the preceding recitation of "or". Claim 4 is also indefinite in the placement of a period at the end of part (d)(ii), which should be changed to --; and--.

Claim 4 is indefinite in its recitation in part (e) of "(if required)" which is redundant and unduly narrative.

Claims 5-7 are unduly narrative and alternative in their recitation of "and/or" and "same or different", so that the required claimed embodiments are unclear.

Claim 5, part (d) is indefinite in its recitation of "where appropriate" which is unduly narrative and redundant.

Claims 1 and 3-4 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to the use of genes conferring resistance to antibiotics or herbicides, as per pages 88-124 of the specification. See M.P.E.P. §§ 706.03(n) and 706.03(z).

The specification only demonstrates the use of antibiotic resistance genes and the past identification of herbicide resistance genes. Genes conferring resistance to other chemical agents or to any physiological stress such as disease or drought resistance were not identified, and no guidance was presented regarding the evaluation of resistance to such stresses in transformed or non-transformed plants. Furthermore, the identification and cloning of stress resistance genes such as disease resistance genes has been largely unsuccessful and may be hampered by large numbers of genes, by the complexity and size of the plant genome, by the complex and multistep and transient nature of disease resistance, and by the lack of direct correlation between chemical substances produced by the plant in response to pathogen attack and actual disease resistance (see, e.g., Bennetzen et al., page 99, bottom paragraph; page 100, second paragraph; page

101, first full paragraph; page 103, first full paragraph; paragraph bridging pages 103 and 104; paragraph bridging pages 104 and 106; paragraph bridging pages 107 and 108; paragraph bridging pages 109 and 110; page 115, third full paragraph; page 117, bottom paragraph; page 118, second full paragraph).

Given the lack of any guidance regarding the identification of non-exemplified stress resistance genes and their possible polygenic nature, as well as the lack of any information regarding the controlled, selective exposure of desired plants to non-exemplified chemical or physiological stresses such as disease or heat; the breadth of the claims which encompass any type of stress; and the unpredictability inherent in the process as discussed supra; undue experimentation would have been required by one skilled in the art to identify and isolate those stress resistance genes other than the exemplified antibiotic or herbicide resistance genes or to develop and evaluate means of selective exposure to non-exemplified stresses for the obtention of male sterility.

Claims 1 and 3-7 are deemed free of the prior art, given the unpredictability inherent in the process as discussed supra, and the failure of the prior art to teach or suggest the claimed method of obtaining male sterile plants following transformation with sense and antisense stress resistance constructs, as stated in allowed related application Serial No. 07/892,635, now U.S. Patent No. 5,356,799.

No claim is allowed.

Serial No. 08/484,838  
Art Unit 1903

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Robinson, can be reached on Monday through Friday at (703) 308-2897.

The fax phone number for this Group is (703) 308-4227.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

November 4, 1996

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 180

*David T. Fox*